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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,490	12/17/2001	Frank Olschewski	5005.1014	6551

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DAVIDSON, DAVIDSON & KAPPEL, LLC
485 SEVENTH AVENUE, 14TH FLOOR
NEW YORK, NY 10018

EXAMINER

DASTOURI, MEHRDAD

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,490

Applicant(s)

OLSCHEWSKI, FRANK

Examiner

Mehrdad Dastouri

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 17, 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/28/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed March 7, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Only page 21 and the remaining even pages of the IDS publication "AR" have been submitted. It appears that this publication contains "Material Information" to the patentability of this application.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. The description of empty boxes should be properly indicated. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Haykin (Neural Networks, A Comprehensive Foundation).

Regarding Claim 1, Haykin discloses a method for ascertaining process variables with a microscope system, the method comprises the following steps:

a) combining into one intensity vector the intensities ascertained by a plurality of detectors from different spectral regions of a measurement operation (Page 408, input signal vector \mathbf{x} , (10.7));

b) calculating a norm of the intensity vector (Page 409, first and second paragraph, Equation (10.9));

c) discarding those intensity vectors whose norm is less than a definable threshold value, so that said vectors are left out of consideration in the remainder of the method (Page 409, first and second paragraph, Equation (10.9));

d) normalizing the intensity vectors (Page 410, second full paragraph);

e) delivering the intensity vectors to a vector quantizer and processing the intensity vectors using the vector quantizer (Page 415, PROPERTY 1; ; and

f) reading code book vectors out of the vector quantizer (Figures 10.14 and 10.15; Pages 416-418; Figure 10.24; Pages 427-431; Hierarchical Vector Quantization).

Regarding Claim 2, Haykin further discloses the method as defined in Claim 1, wherein calculation of the norm is based on the Euclidean distance to a coordinate origin (Page 409, Equation (10.9)).

Regarding Claim 3, Haykin further discloses the method as defined in Claim 1, wherein the vector quantizer is embodied as a "learning vector quantizer" or as a competitively learning neural network, or can be derived or inferred therefrom in the context of a mathematical approximation (Page 410, Adaptive Process; Pages 427-430, Section 10.9, Learning Vector Quantization).

Regarding Claim 4, Haykin further discloses the method as defined in Claim 1, characterized by the following steps:

selecting a subset from the plurality of code book vectors (Pages 427-430; Figures 10.22-10.24); and
conveying the selected code book vectors to an analysis and visualization unit (Pages 427-430; Figures 10.22-10.24).

Regarding Claim 5, Haykin further discloses the method as defined in Claim 4, wherein selection of the subset of code book vectors is limited to those code book vectors that are nearest to the axes of a coordinate system, each coordinate axis representing detection in one detection channel (Pages 427-432, Figures 10.23, 10.24 and 10.25).

Regarding Claim 6, Haykin further discloses the method as defined in Claim 4, wherein the code book vectors have a slope with respect to the coordinate axes and to each other and the slope is employed to ascertain the crosstalk of the individual detection channels (Figure 10.25; Page 431, Vector Quantizers VQ_1 and VQ_2).

Regarding Claim 7, Haykin further discloses the method as defined in Claim 6, wherein on the basis of the ascertained crosstalk an automatic adjustment of a multi-band detector is performed in order to minimize the crosstalk of the individual detection channels (Pages 427-432, Figures 10.23, 10.24 and 10.25).

Regarding Claim 8, Haykin further discloses the method as defined in Claim 4, wherein the axes of the coordinate are visually depicted in double or triple fashion, and the code book vectors located nearest to said axes are plotted (Pages 427-432, Figures 10.23, 10.24, 10.25 and 10.26).

Regarding Claim 9, Haykin further discloses the method as defined in Claim 4, wherein the axes of the coordinate system are visually depicted in pairs, and the code book vectors located nearest to said axes are plotted (Pages 427-432, Figures 10.23, 10.24, 10.25 and 10.26).

Regarding Claim 10, Haykin further discloses the method as defined in Claim 4, wherein a counter that serves to visualize the significance of the signal component represented by the particular code book vector is allocated to each visual depiction of the axes of the coordinate system (Pages 427-432, Figures 10.23, 10.24, 10.25 and 10.26).

Regarding Claim 11, Haykin further discloses the method as defined in Claim 1, comprising the following steps:

- acquiring the local coordinates in a specimen during the scanning operation, and the intensities associated with the local coordinates (Pages 424-430; Sections 10.8-10.10);

- comparing the intensity vectors to the code book vectors (Pages 424-432; Sections 10.8-10.10); and

- classifying the intensity vectors onto the nearest code book vector (Pages 424-432; Sections 10.8-10.10).

Regarding Claim 12, Haykin further discloses the method as defined in Claim 1, wherein the following steps are performed before steps a) through f):

- time-offset, block-based intermediate storage of the intensity vectors (Pages 424-432; Sections 10.8-10.10); and

formation of vectors from the particular current intensity vector and from the same-offset intensity vector acquired before the particular current and intermediately stored intensity vector, the two vectors deriving from the same location in the specimen (Pages 424-432; Sections 10.8-10.10).

Regarding Claim 13, Haykin further discloses the method as defined in Claim 12, wherein the slopes of the code book vectors are analyzed in order to ascertain and visualize the bleaching behavior or influences of active setting parameters (Pages 424-432; Sections 10.8-10.10).

Regarding Claim 14, Haykin further discloses the method as defined in Claim 1, wherein the following steps are performed:

calculating a correction matrix from the code book vectors (Pages 412, 428-430);
and

applying the correction matrix to the currently measured intensity vectors with simultaneous image construction (Pages 412, 428-430).

With regards to Claims 15 and 27, arguments analogous to those presented for Claim 1 are applicable to Claims 15 and 27.

With regards to Claims 16 and 28, arguments analogous to those presented for Claim 2 are applicable to Claims 16 and 28.

With regards to Claims 17 and 29, arguments analogous to those presented for Claim 3 are applicable to Claims 17 and 29.

With regards to Claims 18 and 30, arguments analogous to those presented for Claim 4 are applicable to Claims 18 and 30.

With regards to Claim 19, arguments analogous to those presented for Claims 5-7 are applicable to Claim 19.

With regards to Claims 30 and 31, arguments analogous to those presented for Claims 5-7 are applicable to Claims 30 and 31.

With regards to Claims 20 and 33, arguments analogous to those presented for Claim 8 are applicable to Claims 20 and 33.

With regards to Claims 21 and 34, arguments analogous to those presented for Claim 9 are applicable to Claims 21 and 34.

With regards to Claims 22 and 35, arguments analogous to those presented for Claim 10 are applicable to Claims 22 and 35.

With regards to Claims 23 and 36, arguments analogous to those presented for Claim 11 are applicable to Claims 23 and 36.

With regards to Claims 24 and 37, arguments analogous to those presented for Claim 12 are applicable to Claims 24 and 37.

With regards to Claims 25 and 38, arguments analogous to those presented for Claim 13 are applicable to Claims 25 and 38.

With regards to Claims 26 and 39, arguments analogous to those presented for Claim 14 are applicable to Claims 26 and 39.

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,404,923 to Chaddha.

U.S. Patent 5,812,700 to Fang et al.

U.S. Patent 5,734,796 to Pao.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehrdad Dastouri
Primary examiner
Art Unit 2623
March 20, 2005

**MEHRDAD DASTOURI
PRIMARY EXAMINER**

Mehrdad Dastouri